

10/031,149

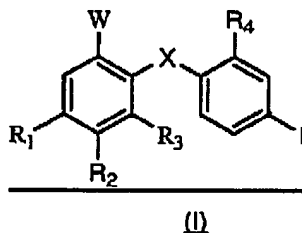
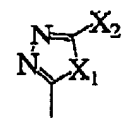
- 2 - Stephen Douglas Barrett et al.

**AMENDMENTS TO THE CLAIMS**

The following listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of claims:**1 (canceled).**

**2 (currently amended).** ~~The method of claim 1, wherein said chronic pain is~~ A method for treating chronic pain selected from neuropathic pain, idiopathic pain, and pain associated with crush injury, constriction injury, burn pain, gout, trigeminal neuralgia, causalgia, plexus avulsion, limb amputation, chronic alcoholism, vitamin deficiency, uremia, or hypothyroidism, said method comprising administering to a subject in need of such treatment a composition comprising a MEK inhibitor selected from a compound of formula (I):

W is:X is NH;X<sub>1</sub> is O, or S;X<sub>2</sub> is H, OH, SH, or NHR<sub>E</sub>;R<sub>E</sub> is H or C<sub>1-4</sub> alkyl;

10/031,149

- 3 -

Stephen Douglas Barrett et al.

each of  $R_1$  and  $R_2$  is independently selected from H, F,  $\text{NO}_2$ , Br and Cl;  
 $R_1$  can also be  $\text{SO}_2\text{NR}_6\text{R}_H$ , or  $R_1$  and  $R_2$  together with the benzene ring to which they are  
attached constitute an indole, isoindole, benzofuran, benzothiophene, indazole,  
benzimidazole, or benzthioazole;

$R_3$  is H or F;

each of  $R_6$ ,  $R_H$ , and  $R_9$  is independently selected from H, Cl and  $\text{CH}_3$ ;

and

wherein each hydrocarbon radical above is optionally substituted with between 1 and 3  
substituents independently selected from halo, hydroxyl, amino, (amino)sulfonyl, and  
 $\text{NO}_2$ ; and

wherein each heterocyclic radical above is optionally substituted with between 1 and 3  
substituents independently selected from halo,  $\text{C}_{3-4}$  alkyl,  $\text{C}_{3-6}$  cycloalkyl,  $\text{C}_{3-4}$  alkenyl,  $\text{C}_{3-4}$  alkynyl, phenyl, hydroxyl, amino, (amino)sulfonyl, and  $\text{NO}_2$ , wherein each substituent  
alkyl, cycloalkyl, alkenyl, alkynyl or phenyl is in turn optionally substituted with between 1  
and 2 substituents independently selected from halo,  $\text{C}_{1-2}$  alkyl, hydroxyl, amino, and  
 $\text{NO}_2$ ;

or a pharmaceutically acceptable salt or  $\text{C}_{1-8}$  ester thereof.

**3 and 4 (canceled).**

**5 (original).** The method of claim 2, wherein said chronic pain is associated with chronic alcoholism, vitamin deficiency, uremia, or hypothyroidism.

**6 (original).** The method of claim 2, wherein said chronic pain is associated with idiopathic pain.

**7-9 (canceled).**

**10 (currently amended).** The method of ~~claim 1~~ claim 2, wherein  $R_1$  is bromo or chloro.

10/031,149

- 4 - Stephen Douglas Barrett et al.

11 (currently amended). A method of ~~claim 1~~ claim 2, wherein R<sub>2</sub> is fluoro.

12 (currently amended). A method of ~~claim 1~~ claim 2, wherein R<sub>3</sub> is H.

13 (original). A method of claim 12, wherein each of R<sub>2</sub> and R<sub>3</sub> is H.

14 (currently amended). A method of ~~claim 1~~ claim 2, wherein each of R<sub>2</sub> and R<sub>3</sub> is fluoro.

15 (original). A method of claim 14, wherein R<sub>1</sub> is bromo.

16 (original). A method of claim 14, wherein R<sub>1</sub> is fluoro.

17 (currently amended). A method of ~~claim 1~~ claim 2, wherein R<sub>2</sub> is nitro.

18 (original). A method of claim 16, wherein R<sub>3</sub> is H.

19 (currently amended). A method of ~~claim 1~~ claim 2, wherein R<sub>4</sub> is chloro.

20 (currently amended). A method of ~~claim 1~~ claim 2, wherein R<sub>4</sub> is methyl.

21-24 (canceled).

25 (currently amended). A method of ~~claim 1~~ claim 2, wherein X<sub>2</sub> is OH, SH, or NH<sub>2</sub>.

26 (currently amended). A method of ~~claim 1~~ claim 2, wherein X<sub>2</sub> is NHCH<sub>3</sub> or OH.

27 (currently amended). A method of ~~claim 1~~ claim 2, wherein said MEK inhibitor ~~has a structure is~~ selected from: [5-fluoro-2-(1H-tetrazol-5-yl)-phenyl]-(4-iodo-2-methyl-phenyl)-amine; [2,3-difluoro-6-(1H-tetrazol-5-yl)-phenyl]-(4-iodo-2-methyl-phenyl)-amine; (4-iodo-2-methyl-phenyl)-[2,3,4-trifluoro-6-(1H-tetrazol-5-yl)-phenyl]-amine; [4-bromo-2,3-difluoro-6-(1H-tetrazol-5-yl)-phenyl]-(4-iodo-2-methyl-phenyl)-amine; [5-fluoro-4-nitro-2-(1H-tetrazol-5-yl)-phenyl]-(4-iodo-2-methyl-phenyl)-amine; [2-(4,4-dimethyl-4,5-dihydro-oxazol-2-yl)-5-fluoro-phenyl]-(4-iodo-2-methyl-phenyl)-amine; [6-(4,4-dimethyl-4,5-dihydro-oxazol-2-yl)-2,3-difluoro-phenyl]-(4-iodo-2-methyl-phenyl)-amine; [6-(4,4-dimethyl-4,5-dihydro-oxazol-2-yl)-2,3,4-trifluoro-phenyl]-(4-iodo-2-methyl-phenyl)-amine;

10/031,149

- 5 -

Stephen Douglas Barrett et al.

~~[4-bromo-6-(4,4-dimethyl-4,5-dihydro-oxazol-2-yl)-2,3-difluoro-phenyl]-(4-iodo-2-methyl-phenyl)-amino; [2-(4,4-dimethyl-4,5-dihydro-oxazol-2-yl)-5-fluoro-4-nitro-phenyl]-(4-iodo-2-methyl-phenyl)-amino; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ol; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ol; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ol; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-phenyl]-[1,3,4]thiadiazol-2-ol; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ol; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ol; and 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-phenyl]-[1,3,4]oxadiazol-2-ol; ~~5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ol; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ol; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ol; and 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-phenyl]-4H-[1,2,4]triazol-3-ol.~~~~

**28 (currently amended).** A method of ~~claim 1~~ claim 2, wherein said MEK inhibitor has a structure is selected from: 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ylamine; 5-[3,4-Difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ylamine; 5-[3,4,5-Trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ylamine; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]thiadiazol-2-ylamine; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-phenyl]-[1,3,4]thiadiazol-2-ylamine; 5-[4-Fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ylamine; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ylamine; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ylamine; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ylamine; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-phenyl]-[1,3,4]oxadiazol-2-ylamine; ~~5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ylamine; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ylamine; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ylamine; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazol-3-ylamine; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-phenyl]-4H-[1,2,4]triazol-3-ylamine; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-~~

10/031,149

- 6 - Stephen Douglas Barrett et al.

[1,3,4]thiadiazole-2-thiol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 [1,3,4]thiadiazole-2-thiol; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 [1,3,4]thiadiazole-2-thiol; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-  
 phenyl]-[1,3,4]thiadiazole-2-thiol; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-  
 phenyl]-[1,3,4]thiadiazole-2-thiol; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 [1,3,4]oxadiazole-2-thiol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 [1,3,4]oxadiazole-2-thiol; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 [1,3,4]oxadiazole-2-thiol; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-  
 phenyl]-[1,3,4]oxadiazole-2-thiol; and 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-  
 phenyl]-[1,3,4]oxadiazole-2-thiol; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 4H-[1,2,4]triazole-3-thiol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-  
 [1,2,4]triazole-3-thiol; 5-[3,4,5-trifluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-  
 [1,2,4]triazole-3-thiol; 5-[5-bromo-3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-  
 4H-[1,2,4]triazole-3-thiol; and 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-5-nitro-  
 phenyl]-4H-[1,2,4]triazole-3-thiol.

29-31 (canceled).

**32 (currently amended).** A method of claim 1 claim 2, wherein said MEK inhibitor has a structure is selected from: 2,4-bis-(2-chloro-4-iodo-phenylamino)-3-fluoro-5-nitro-benzoic acid; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ylamine; 5-[4-fluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazol-2-ol; (2,3-difluoro-6-[1,3,4]oxadiazol-2-yl-phenyl)-(4-iodo-2-methyl-phenyl)-amine; and 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-[1,3,4]oxadiazole-2-thiol; 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazole-3-ylamine; and 5-[3,4-difluoro-2-(4-iodo-2-methyl-phenylamino)-phenyl]-4H-[1,2,4]triazole-3-thiol.

33 (canceled).

**34 (new).** The method of claim 2, wherein the chronic pain is associated with crush injury or constriction injury.

**35 (new).** The method of claim 2, wherein the chronic pain is associated with burn pain, gout, trigeminal neuralgia, causalgia, plexus avulsion, or limb amputation.